

SPECTRUM[®]

SMARTMIM-216 Management Module Guide

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Use this guide as a reference for the SMARTMIM-216 management software. Before using this guide, you should be familiar with SPECTRUM's functions and navigational techniques as described in the *Administrator's Reference* and the *Operator's Reference*.

For the purposes of this guide, SMARTMIM-216 is referred to as "device."

What Is in This Guide

The following outlines the organization of the *SMARTMIM-216 Management Module Guide*:

Chapter	Description
Chapter 1 <i>Introduction</i>	Describes the device, the management module software, and model types. This chapter also provides information on accessing device-specific views.
Chapter 2 <i>Device Views</i>	Describes the Device views representing the device.
Chapter 3 <i>Configuration Views</i>	Describes the Configuration views for the device and the network management information provided by the views.
Chapter 4 <i>Event and Alarm Messages</i>	Lists and explains the event and alarm messages generated in the Event Log or Alarm Manager for the device.
Chapter 5 <i>Application Views</i>	Describes the Application views for the device and application-specific information for this device.

Conventions

This guide uses the following conventions:

- Menu selections and buttons referenced in text appear in **bold**; for example, **Configuration** or **Detail**.
- Button names appear in shadowed boxes when introducing paragraphs describing their use; for example:

Help

- Menu navigation appears in order of selection; for example, **Icon Subviews -> Utilities -> Application**.
- Referenced chapter titles and section headings appear in *italics*.
- Referenced documents appear in ***bold italics***.
- SMARTMIM-216 is referred to as “device.”
- References in blue are hypertext links for on line documents.

Related SPECTRUM Documentation

When using this guide, you should have a clear understanding of SPECTRUM functionality and navigation techniques as described in the following recommended documentation:

Operator's Reference

Administrator's Reference

Report Generator User's Guide

Application View Reference

Getting Started with SPECTRUM 4.0 for Operators

Getting Started with SPECTRUM 4.0 for Administrators

How to Manage Your Network with SPECTRUM

Other Related Documentation

Refer to the following documentation for more information on managing TCP/IP-based networks:

Martin, James, Kathleen Kavanagh Chapman, Joe Leben. ***Local Area Networks: Architectures and Implementations***, 2d ed. Englewood Cliffs, NJ: Prentice Hall, 1994.

Rose, Marshall T. ***The Simple Book: An Introduction to Management of TCP/IP-based Internets***. Englewood Cliffs, NJ: Prentice Hall, 1991.

Stallings, William. ***Data and Computer Communications***, 4th ed. New York: Macmillan Publishing Company, 1994.

Tanenbaum, Andrew S. ***Computer Networks***, 3d ed. Englewood Cliffs, NJ: Prentice Hall, 1996.



Chapter 1

Introduction

What Is in This Chapter

This chapter introduces the SPECTRUM management module covering the SMARTMIM-216. It describes the following:

- SMARTMIM-216
- SPECTRUM Device Management
 - Accessing SPECTRUM Views
- SPECTRUM Views Roadmap
- SPMA Support

SMARTMIM-216

The SMARTMIM-216 is a 16-port high performance Ethernet switching module with Fast Ethernet uplinks. It features fourteen 10Base-T front panel ports, which are supported by RJ-45 connectors, and two optional 100Base-TX or multi-mode fiber 100Base-FX uplinks using Fast Ethernet Port Interface modules (FEPIMs).

The SMARTMIM-216 offers both Switched and Fast ethernet connectivity to the MMAC-FNB (Flexible Network Bus), while ensuring connectivity to existing Media Interface Modules (MIMs). Full duplex support on all interfaces, with support for IEEE Auto-Negotiation on the 100Base-TX ports is featured. The product also supports a unique Port Mirroring function, allowing analyzers to be connected to individual or multiple ports on the switch. In addition, port trunking, via Cabletron SmartTrunk or SecureFast Virtual Networking, delivers high-bandwidth inter-switch links and traffic load balancing.

SPECTRUM Device Management

SPECTRUM management modules are software packages that provide templates for creating models of devices. These templates, called model types, specify attributes that correspond to objects defined in the Management Information Bases (MIBs) which govern the operation of the device or application to be modeled.

SpectroGRAPH uses modified window's views to graphically display these models as icons. These icons provide color-coded status information and double-click access to other views that contain detailed configuration and performance information. The models that are represented by these icons reside in the SpectroSERVER database, where they are continuously updated with new information retrieved during the polling cycle. The model type name of the device for this management module is SMARTMIM-216.

Accessing SPECTRUM Views

Access these views using double click zones. Icons and labels that display information within an icon, provide access to SPECTRUM views. This is done using double-click zones (Figure 1-1) or Icon Subviews menus (Figure 1-2).

To access the Icon Subviews menu as shown in Figure 1-2, and Figure 1-3 do the following:

1. Highlight the icon.
2. From the View menu, select **Icon Subviews** or click the applicable mouse button (middle or right). Refer to the ***Operator's Reference*** for information on configuring your mouse.

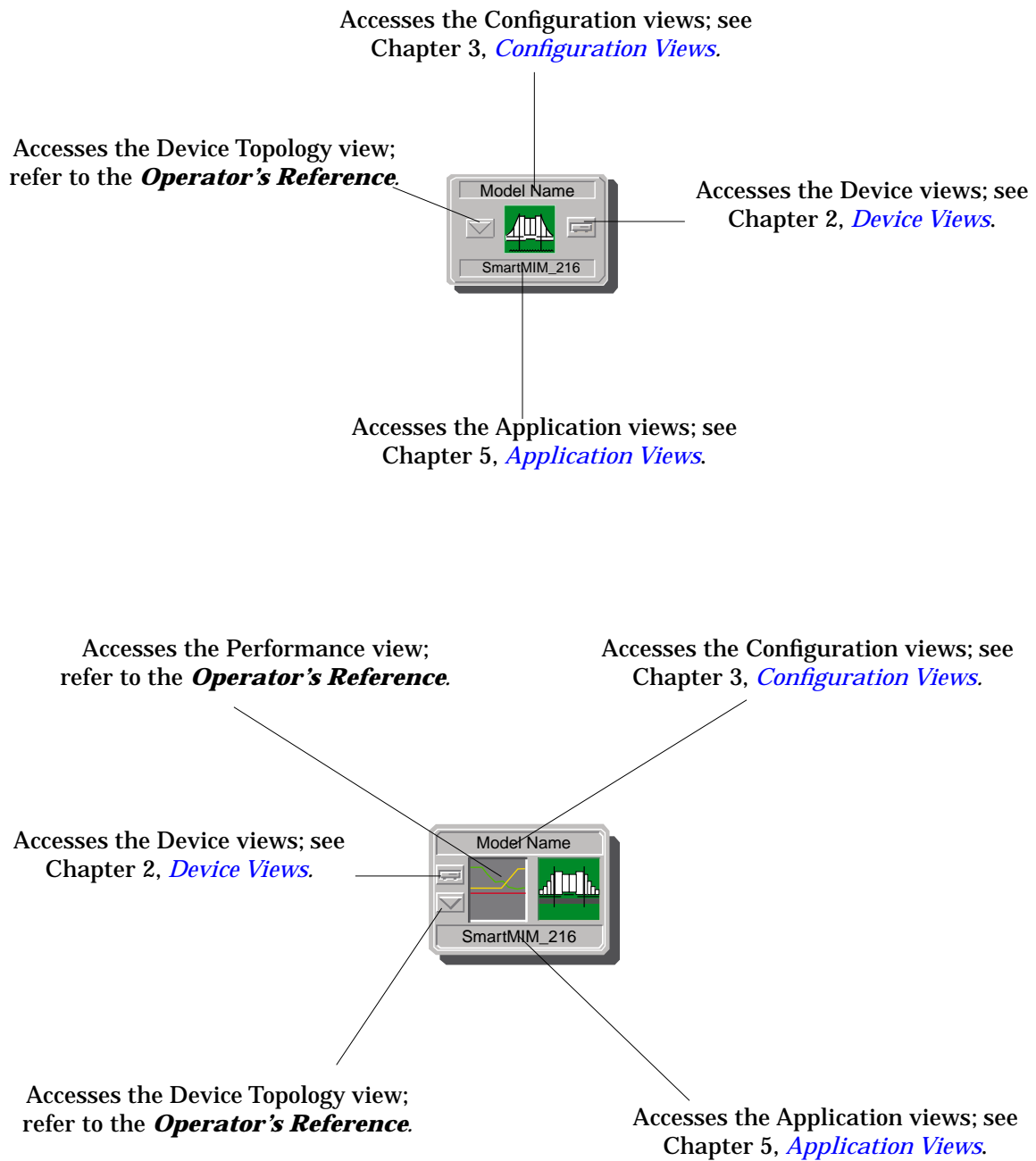
Figure 1-1. Using Double-Click Zones to Access SPECTRUM Views

Figure 1-2. Using the Icon Subviews Menu to Access SPECTRUM Views

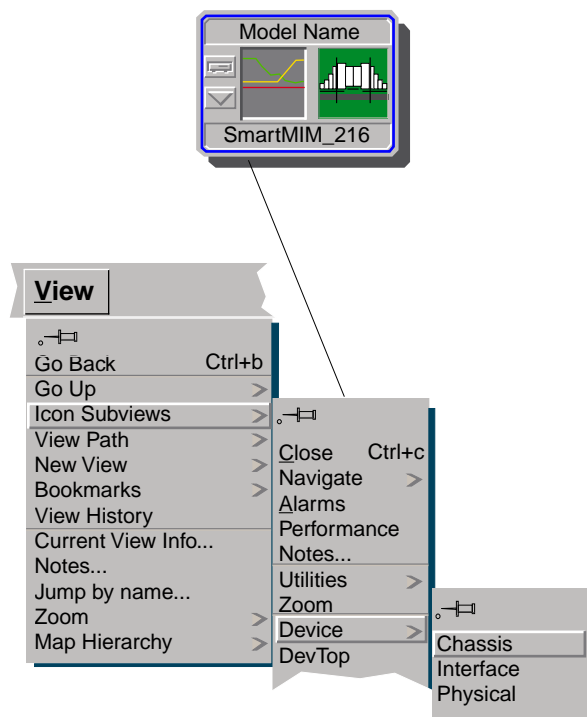
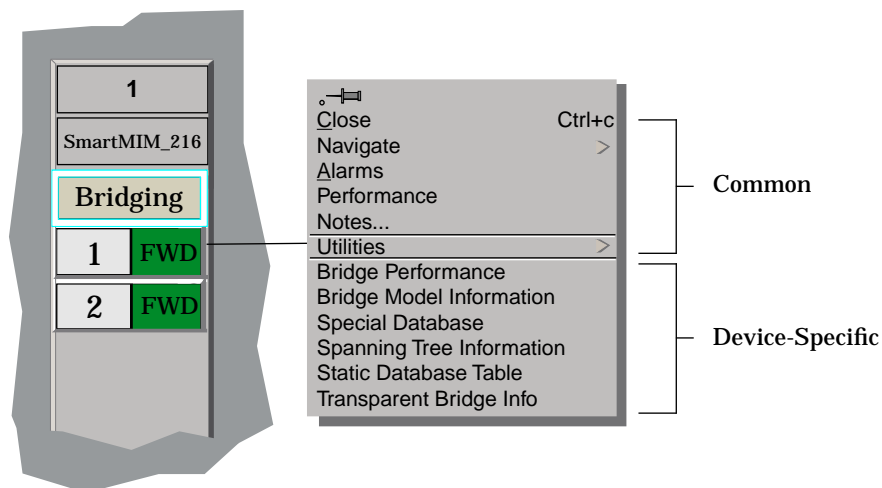


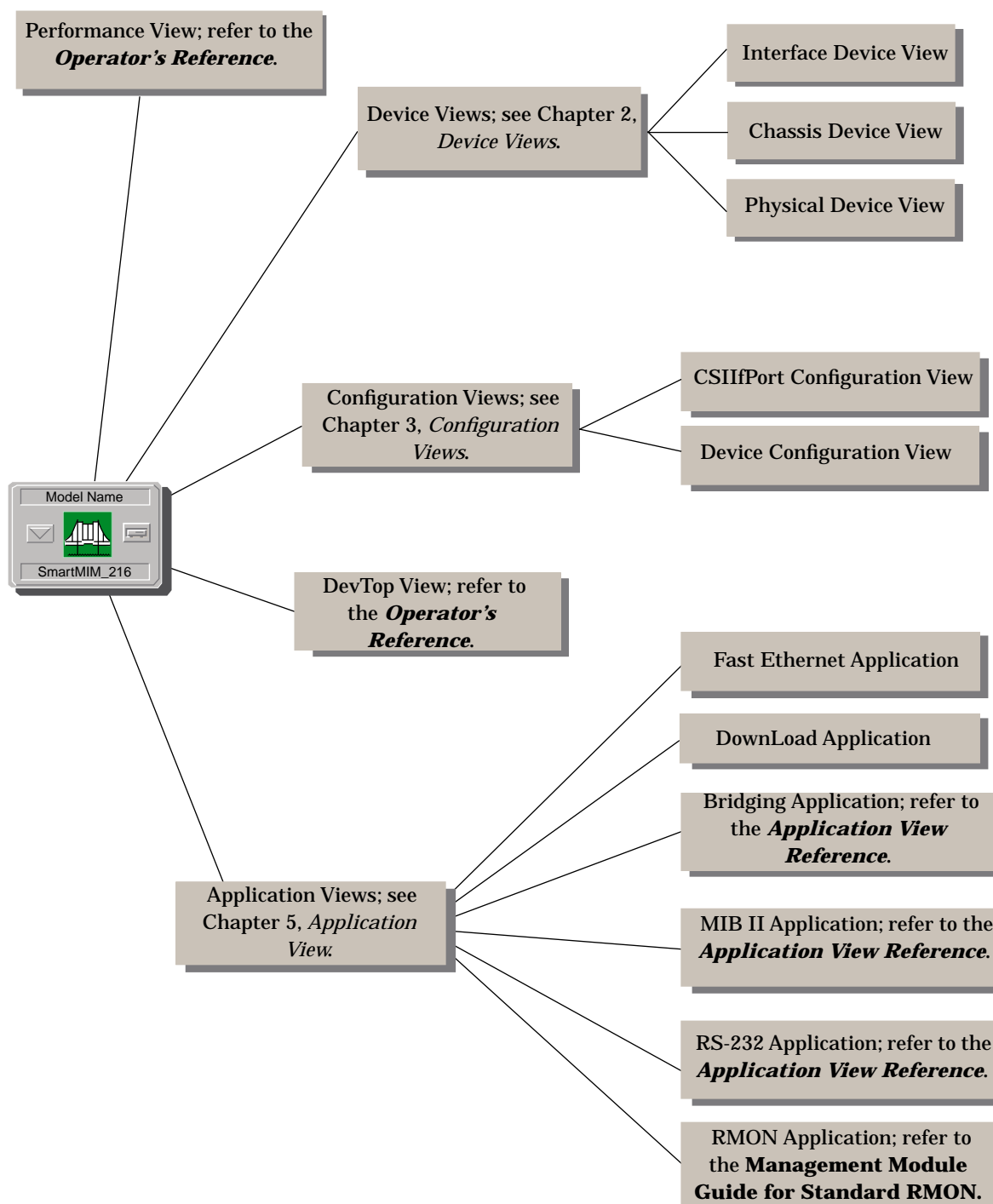
Figure 1-3. Accessing Device-Specific Subviews



SPECTRUM Views Roadmap

[Figure 1-4](#) shows a “roadmap” of the SPECTRUM views for this device. These views are accessible from double-click zones ([Figure 1-1](#)) and Icon Subviews menus ([Figure 1-2](#) and [Figure 1-3](#)).

Figure 1-4. SPECTRUM Views Roadmap

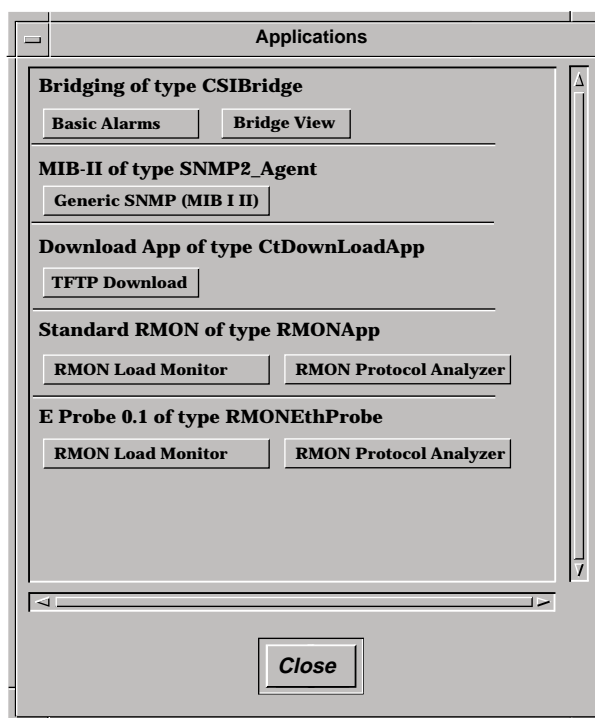


SPMA Support

SPECTRUM also supports SPECTRUM Portable Management Application (SPMA) functionality for these devices. [Figure 1-5](#) shows an example of an SPMA Applications view. To open the SPMA Applications view:

1. Highlight the Device icon.
2. From the View menu, select **Icon Subviews -> Utilities -> Applications**.

Figure 1-5. SPMA Applications View



The buttons within the SPMA Applications view provide access to SPMA-specific views and dialog boxes. The Applications view for a particular device may include different buttons depending upon the applications available, the BRIMs installed, and the configuration of the device. Refer to the following documentation for information on the SPMA views accessible from the Applications view:

SPECTRUM Portable Management Application for the SmartMIM-216 User's Guide

SPECTRUM Portable Management Application Tools Guide.



Chapter 2

Device Views

What Is in This Chapter

This chapter describes the following Device views and subviews available for the SMARTMIM-216:

- Interface Device view
- Chassis Device view
- Physical Device view

See Chapter 1, [Introduction](#), for information on accessing SPECTRUM views from the Device icon and accessing device-specific subviews.

Interface Device View

This section describes the Interface icons and the Interface Options panel displayed in the Interface Device view. This view provides dynamic configuration and performance information for each interface on the device. If the configuration changes, SPECTRUM modifies the Device view after the next polling cycle to reflect the new configuration. This view also provides a Device icon that allows you to monitor the device operation and to access other device-specific views. [Figure 2-1](#) shows an example of the Interface Device view for the SMARTMIM-216.


Figure 2-1. Interface Device View

Primary Landscape of type SmartMIM_216

* **File** **View** **Help?**

Model	<input type="text"/>	Network Address	<input type="text"/>	System Up Time	<input type="text"/>
Contact	<input type="text"/>			Manufacturer	<input type="text"/>
Description	<input type="text"/>			Device Type	<input type="text"/>
Location	<input type="text"/>	Primary Application	<input type="text" value="Bridging"/>	Serial Number	<input type="text"/>

Model Name



SmartMIM_216

Filter

Network Information

Interface Description

Device Icon

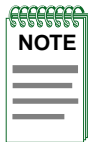
Interface Options Panel

1 ON ETHERNET 0:01D:17:2F:B6 134.141.59.20 1	5 ON ETHERNET 0:01D:17:2F:BE 0	9 ON ETHERNET 0:01D:17:2F:C2 0	13 ON ETHERNET 0:01D:17:2F:CA 0
2 ON ETHERNET 0:01D:17:2F:B7 0	6 ON ETHERNET 0:01D:17:2F:BF 0	10 ON ETHERNET 0:01D:17:2F:C3 0	14 ON ETHERNET 0:01D:17:2F:CB 0
3 ON ETHERNET 0:01D:17:2F:B8 0	7 ON ETHERNET 0:01D:17:2F:BG 0	11 ON ETHERNET 0:01D:17:2F:C4 0	15 ON ETHERNET 0:01D:17:2F:CC 0
4 ON ETHERNET 0:01D:17:2F:B9 0	8 ON ETHERNET 0:01D:17:2F:BH 0	12 ON ETHERNET 0:01D:17:2F:C5 0	16 ON ETHERNET 0:01D:17:2F:CD 0

Interface Icons

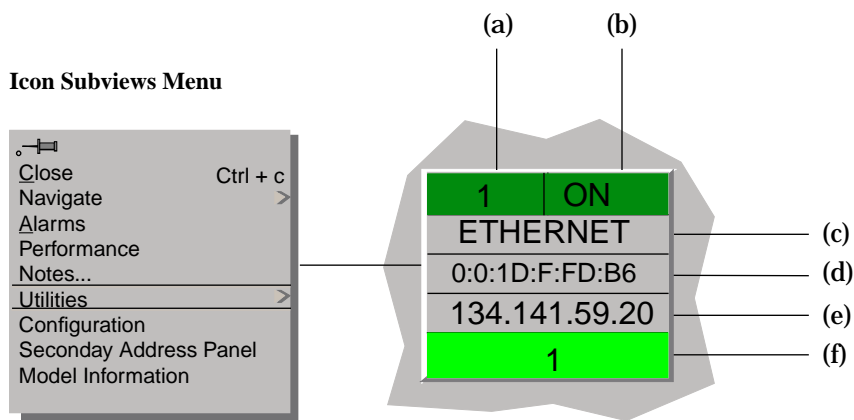
Interface Icon

These icons represent the interfaces or ports of the device. The icons identify the type of interface or port (e.g., Ethernet) and provide statistical information. [Figure 2-2](#) shows an example of an Interface icon, its Icon Subviews menu, and its labels/double-click zones.



The labels (a through f) displayed in the illustration below identify the label name, and when applicable, the view to which it provides double-click access. Example: (b) Administrative Status Label/Port Configuration-CSIIIfPort View displays the Administrative Status and provides double-click access to the Port Configuration-CSIIIfPort View. The menu on the left is the Icon Subviews Menu for that Interface icon.

Figure 2-2. Interface Icon



- a. Interface Label
- b. Administrative Status Label/Port Configuration-CSIIIfPort View
- c. Interface Type Label
- d. MAC Address Label/CSI Interface Port Model Information View
- e. Network Address Label/Secondary Address Panel
- f. Gauge Label/Performance - CSIIIfPort View

Interface Icon Subviews Menu

[Table 2-1](#) describes the Interface icon's device-specific subviews menu selections. For information on accessing device-specific subviews menus, see Chapter 1, [Introduction](#).

Table 2-1. Interface Icon Subviews Menu

Menu Selection	Description
Configuration	Opens the Device Configuration view described on page 3-2 .
Secondary Address Panel	Opens the Secondary Address Panel view described on page 2-7 .
Model Information	Opens the Model Information view described in the <i>Operator's Reference</i> .

Interface Label

This label displays the interface (port) number.

Administrative Status Label

This label displays the status of this interface. Double-click this label to open the Port Configuration - CSIIIfPort view described on page [3-4](#). [Table 2-2](#) and [Table 2-3](#) list the possible states relative to the application selected (Physical or Bridging). The default application for this view is Physical (MIB-II). To select the application to be displayed, click the **Filter** menu button in the Interface Options panel. (Refer to the *Interface Options Panel* described on page [2-7](#) for more information on the Filter menu button.)

Table 2-2. Administrative Status for the Physical or MIB II Application

Color	Status	Description
Green	ON	Port is operational.
Blue	OFF	Port is off.
Red	TST	Port is in the test mode.

Table 2-3. Administrative Status for the Bridging Application

Color	Status	Description
Green	FWD	bridge port is forwarding
Blue	DIS	port is disabled
Magenta	LST	bridge is in the listening mode
Magenta	LRN	bridge is in the learning mode
Orange	BLK	bridge port is in the blocking mode
Red	BRK	bridge port is broken
Blue	UNK	status is unknown

Interface Type Label

This label displays the interface type. [Table 2-4](#) lists the possible interface types.

Table 2-4. Interface Types

Type	Description
Other	None of the following
Reg1822	Regular 1822
HDH1822	HDLC Distant Host protocol
DDNX25	Defense Data Network X.25
rfc877X25	RFC877 X.25
Ethernet	Ethernet CSMA/CD
iso88023	ISO CSMA/CD
iso88024	ISO token bus
iso88025	ISO token ring
iso88026	ISO man
starLan	StarLAN IEEE 802.3
Prot10MB	ProNET 10 Mbps
Prot80MB	ProNET 80 Mbps
HyChan	Hyperchannel
FDDI	Fiber Distributed Data Interface
LAPB	X.25 Line Access Procedure, Balanced
SDLC	IBM Synchronous Data Link Control protocol
T1	T1 link (USA and Japan)

Table 2-4. Interface Types (Continued)

Type	Description
CEPT	T1 link (Europe)
BasicISDN	Basic Integrated Services Digital Network
PrimISDN	Proprietary Integrated Services Digital Network
PPSerial	Proprietary Point to Point Serial
PPP	Point to Point Protocol
SFTWARLPBK	Software Loopback
CLNPOverIP	Connectionless Network Protocol over IP
Enet3MB	Ethernet 3 Mbps
XNSoverIP	Xerox Network Service Protocol over IP
SLIP	Generic Serial Line IP
ULTRA	ULTRA Technologies
T-3	T3 link
SMDS	Switched Multimegabit Data Service
FrameRelay	T1 Frame relay

MAC Address Label

This label displays the MAC address of the device interface. Double-click this label to open the CSI Interface Port Model Information view, described in the *Operator's Reference*.

Network Address Label

This label displays the current IP address of the interface. To select a different IP address for this interface:

1. Double-click the label to open the Secondary Address Panel dialog box.
2. From the Address/Mask table, select the desired IP address entry to replace the current IP address.
3. Click **Update**.

Secondary Address Panel

This panel allows you to view and change the current IP address and mask for the device. The Secondary Address Panel includes a table of IP addresses and masks. Information displayed in this table is obtained from the Address Translation table within the device's firmware. The Secondary Address Panel provides the following field and button.

IP Address

Displays the current IP Address for this interface.

Update

This button allows you to save changes made to the current IP Address of the interface.

See *Network Address Label* for instructions on how to change the current IP address for the selected interface.

Gauge Label

This label displays the performance statistic determined by the Gauge Control Panel for this interface. (See *Gauge Control Panel* described on page 2-8 for more information.) Double-click this label to open the Performance - CSIIIfPort view described in the *Operator's Reference*.

Interface Options Panel

This area of the Interface Device view (see Figure 2-1) allows you to modify the presentation of a highlighted icon. Double-click a non-text area of this panel to open the Gauge Control Panel view described later in this chapter. The Interface Options panel provides the following information.

Filter

This menu button allows you to select the application to be displayed by the Interface icons. You can select other applications such as IP routing if the SPECTRUM Routing Services Management Module is loaded. For more information, refer to the *Routing Services Management Module Guide*.

Network Information

This menu button allows you to select the type of information displayed in the Network Information label of the highlighted icon. Possible selections are ADDRESS, NAME, or MASK.

Interface Description

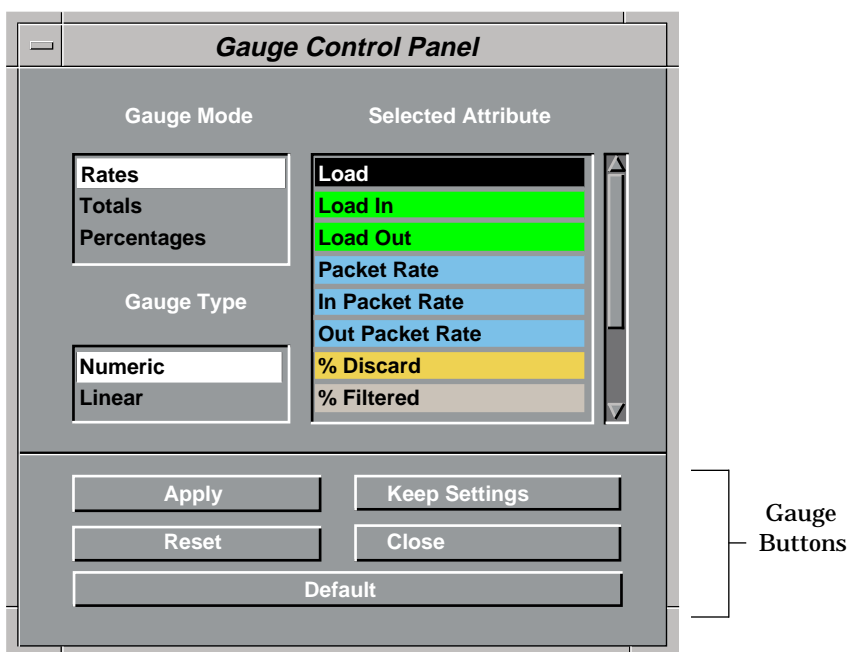
This field provides a description of the highlighted interface. If no interface is highlighted, this field is empty or shows the interface previously highlighted.

Gauge Control Panel

This view ([Figure 2-3](#)) allows you to change the type of statistical information displayed on the Gauge label of the Interface icon. To access the Gauge Control Panel view, double-click the background of the Interface Options panel, or:

1. Highlight the Interface Options panel.
2. From the View menu, select **Icon Subviews -> Gauge Control Panel**.

Figure 2-3. Gauge Control Panel



The Gauge Control Panel provides the following:

- Gauge Mode area
- Selected Attribute area
- Gauge Type area
- Gauge buttons

Gauge Mode

This area allows you to select the type of information shown on the Gauge label of the Interface icon: Rates, Totals, or Percentages. The Percentages selection displays the percentage of the selected interface compared to the rest of the interfaces.

The color displayed on the Gauge label depends upon the particular mode and statistical attribute selected. [Table 2-5](#) and [Table 2-6](#) list the attributes and their corresponding colors for the Totals mode and Rates mode, respectively.

Table 2-5. Totals Mode: Attributes and Corresponding Color

Selected Attribute	Color
Errors	Orange
In Packets	Blue
Out Packets	Blue
In Octets	Green
Out Octets	Green
Discards	Tan
Forwarded	Purple
Host Bound	Yellow
Transmitted	White
Filtered	Gray

Table 2-6. Rates Mode: Attributes and Corresponding Color

Selected Attribute	Color
Load	Green
Load In	Green
Load Out	Green
Packet Rate	Blue
In Packet Rate	Blue
Out Packet Rate	Blue
%Discard	Tan
%Filtered	Gray
%Forwarded	Violet
%Host Bound	Yellow
%Error	Orange
%Transmitted	White

Selected Attribute

This area allows you to select the statistical attribute displayed on the Interface icon's Gauge label. The label changes color to reflect the attribute selected.

Gauge Type

This area allows you to select either a numeric or linear display on the Gauge label.

Gauge Buttons

The following describes the Gauge buttons:

Apply

Applies the current settings to the Gauge label for as long as the view is open.

Keep Settings

Saves the current settings while SpectroGRAPH is running. Settings return to default when you restart SpectroGRAPH.

Reset

Returns the settings to the previously saved values.

Close

Closes the Gauge Control Panel view.

Default

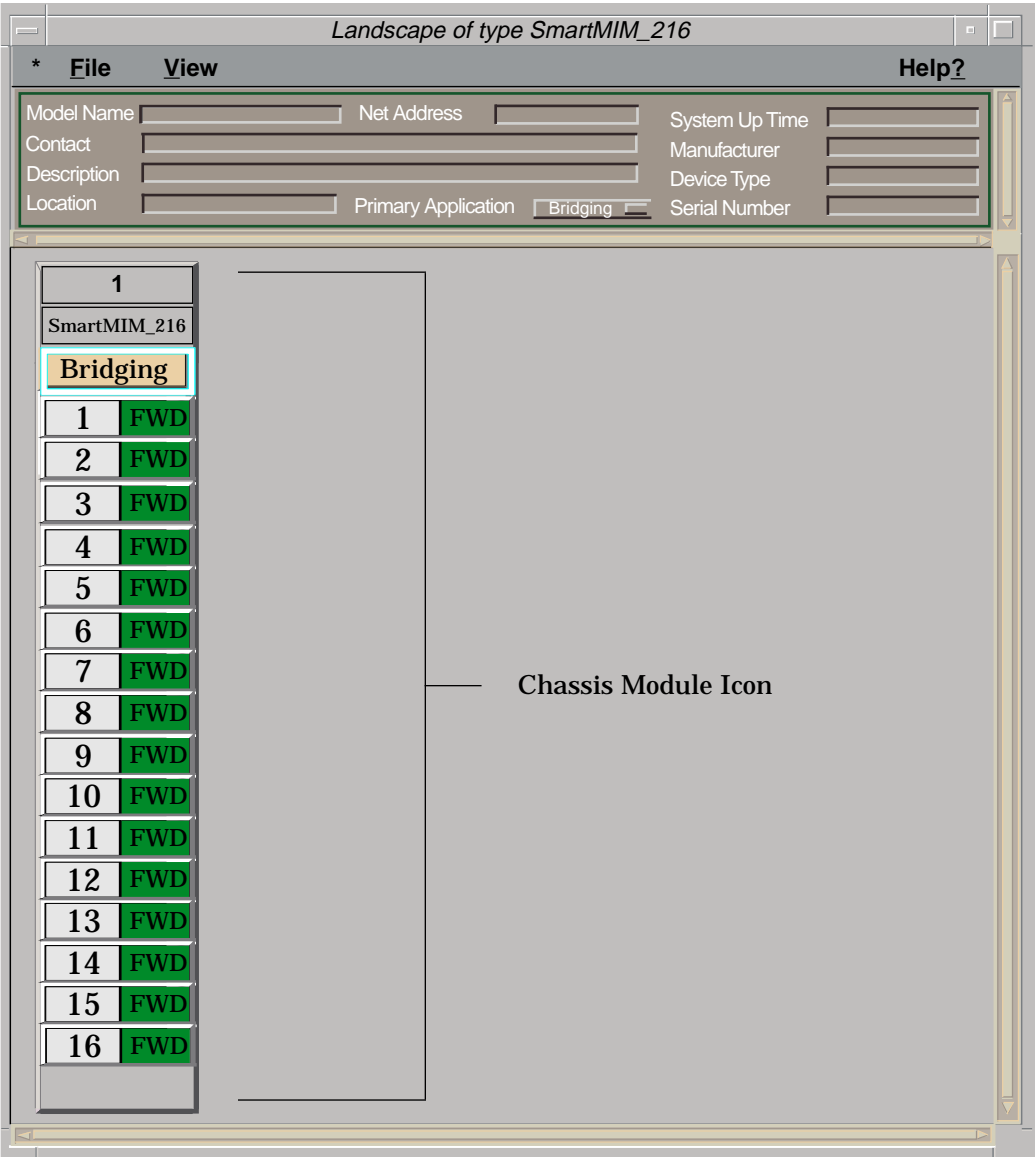
Returns the settings to the SPECTRUM default.

Chassis DeviceView

This view uses a Chassis Module icon to provide a logical representation of the module chassis and its interfaces or ports. The Chassis Module icon provides menu and double-click zone access to the views that monitor the interfaces.

Figure 2-4 shows an example of the Chassis Device view for the SmartMIM-216.

Figure 2-4. Chassis ModuleView



Chassis Module Icon

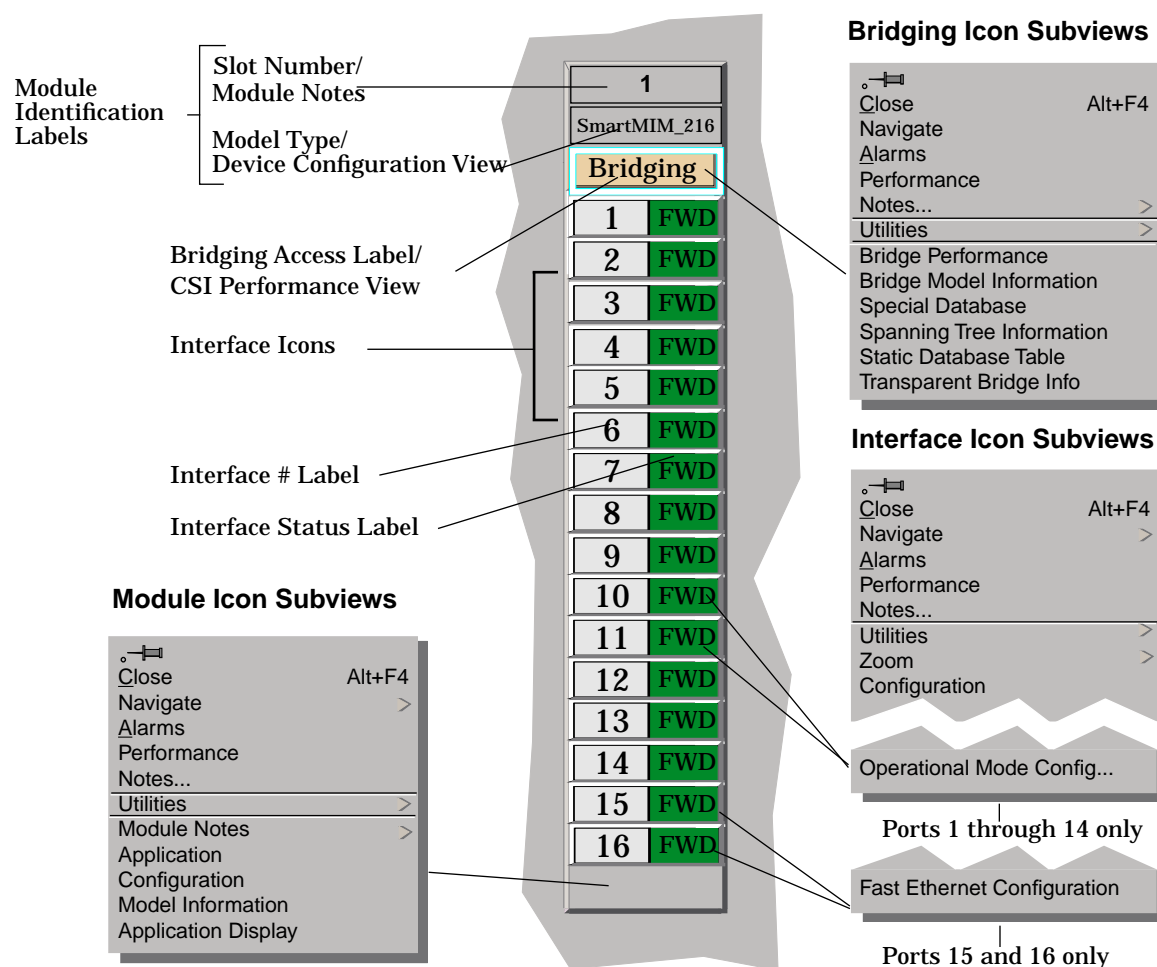
This icon is a logical representation of the physical device and its front panel interfaces or ports. This section describes the information available from the Chassis Module icon. [Figure 2-5](#) shows an example of the Chassis Module icon for the SMARTMIM-216.



The labels to the left of the illustration identify the label names and when applicable, the view to which they provide double-click access. For example, Model Type/Device Configuration View displays the device model number and provides double-click access to the Device Configuration View.

The menus displayed in the illustration are the Icon Subviews menus for that label.

Figure 2-5. Chassis Module Icon



Module Identification Labels

These labels provide the following information (see Figure 2-5):

Slot Number

Identifies the modules location in the MMAC chassis. Double-click this area to open the Module Notes view.

Model Type

Identifies the type of module in this chassis. Double-click this area to access the Device Configuration view, described in Chapter 3, [Configuration Views](#).

Chassis Module Icon Subviews Menu

[Table 2-7](#) lists each of the device-specific Icon Subviews menu selections available for this device. For information on accessing device-specific subviews, see Chapter 1, [Introduction](#).

Table 2-7. Module Icon Subviews Menu

Menu Selection	Description
Module Notes	Opens the Module Notes dialog box.
Application View	Opens the Application view described on page 5-2 .
Configuration	Opens the Device Configuration view described on page 3-2 .
Model Information	Opens the Model Information view described in the <i>Operator's Reference</i> .
Application Display	Opens the Application menu selection. This menu selection allows you to select the physical or bridging application.

Bridging Access Label

This label provides access to the Bridging Icon Subviews menu. (see [Figure 2-5](#).) Double-click the Bridging Access label to open the CSI Bridging Performance view described in the *Operator's Reference*.

Bridging Icon Subviews Menu

[Table 2-8](#) lists specific Icon Subviews menu selections for the Bridging Access Label. For information on accessing device-specific subviews, see Chapter 1, [Introduction](#).

Table 2-8. Bridging Application Subviews Menu

Menu Selection	Description
Bridge Performance	Opens the Performance view described in the <i>Operator's Reference</i> .
Bridge Detail	Opens the Detail view described in the <i>Operator's Reference</i> .
Bridge Model Information	Opens the Model Information view described in the <i>Operator's Reference</i> .
Special Database	Opens the Special Database view.
Spanning Tree Information	Opens the Spanning Tree Information view described in the <i>Application View Reference</i> .
Static Database Table	Opens the Static Database Table view described in the <i>Application View Reference</i> .
Transparent Bridge Info	Opens the Transparent Bridge Information view, with Forwarding Database and Port Tables described in the <i>Application View Reference</i> .

Interface Labels

These labels identify the number and activity status of each port. (See [Figure 2-5](#).) [Table 2-9](#) and [Table 2-10](#) list the possible states relative to the application selected.



Double-clicking the interface status labels will produce an error message informing the user that the Interface Performance View is not accessible from this area.

Table 2-9. Interface Status for the Bridging Application

Color	Status	Description
Green	FWD	Bridge port is forwarding.
Blue	DIS	Port is disabled.

Table 2-9. Interface Status for the Bridging Application (Continued)

Color	Status	Description
Magenta	LST	Bridge is in the listening mode.
Magenta	LRN	Bridge is in the learning mode.
Orange	BLK	Bridge port is in the blocking mode.
Red	BRK	Bridge port is broken.
Blue	UNK	The status is unknown.

Table 2-10. Interface Status for the Physical (MIB II) Application

Color	Status	Description
Green	ON	Port is operational.
Blue	OFF	Port is off.
Red	TST	Port is in the test mode.

Interface Icon Subviews Menu

This menu's Configuration option opens the Configuration dialog box, which allows you to enable or disable the selected port. For information on accessing device-specific subviews, see Chapter 1, [Introduction](#). Also, there is a menu option for Operational Mode Configuration, which allows the port to be configured to Standard mode or Full Duplex mode (ports 1 through 14 only) or Fast Ethernet Configuration, which is detailed in the ***SPECTRUM Portable Management Application for the SMARTMIM-216 User's Guide***.

Physical Device View

This icon ([Figure 2-6](#)) represents the physical device and the subviews menu to the right of the device represents the menu options that can be accessed from this device. See Chapter 1, [Introduction](#), for more information on accessing device-specific views.

Figure 2-6. Physical Device View

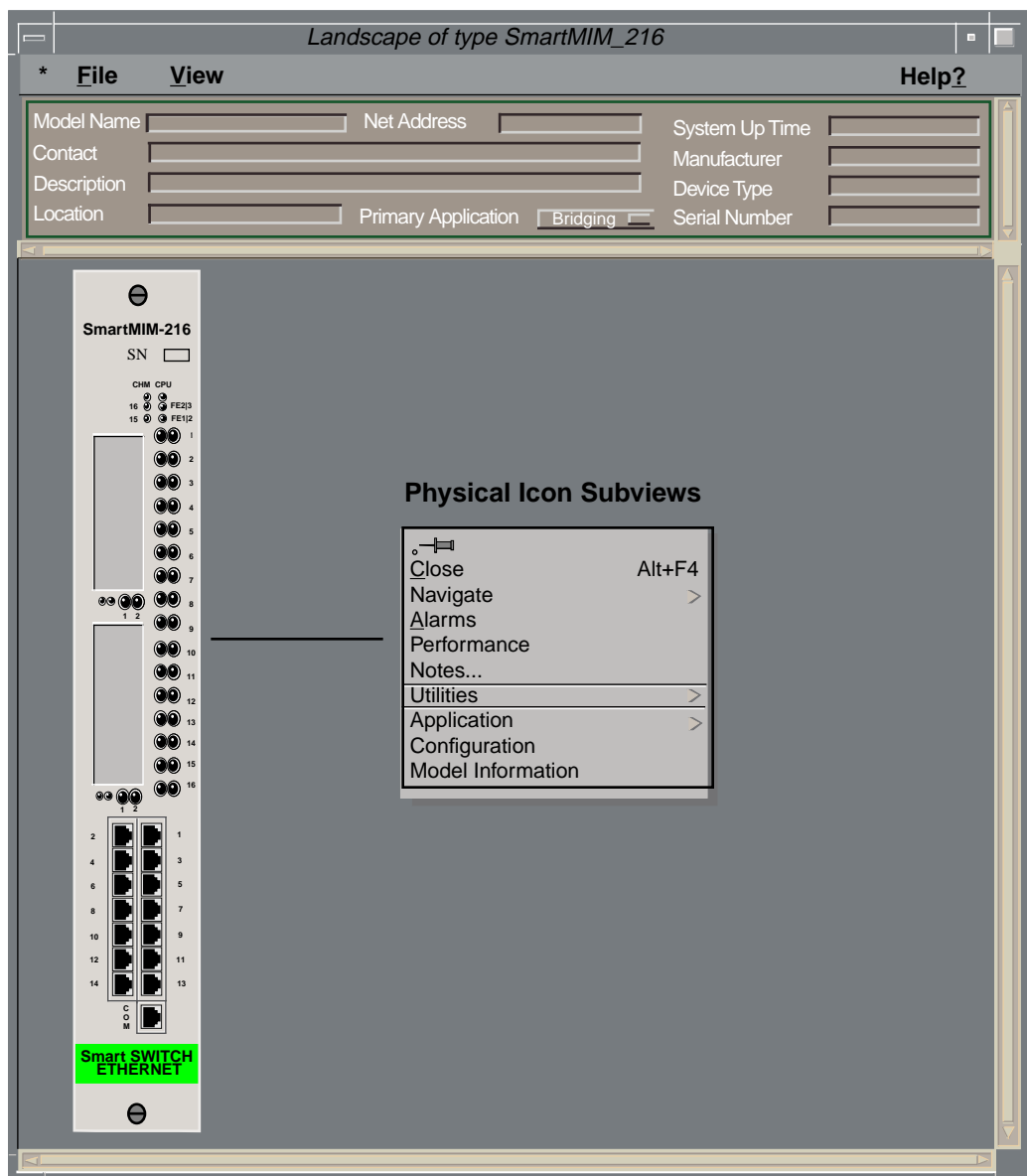


Table 2-11. Physical Icon Subviews Menu

Menu Selection	Description
Application	Opens the Application view described on page 5-2 .
Configuration	Opens the Device Configuration view described on page 3-2 .
Model Information	Opens the Model Information view described in the <i>Operator's Reference</i> .



Chapter 3

Configuration Views

What Is in This Chapter

This chapter describes the Configuration views available for the SMARTMIM-216 Module. These views display network configuration and operating information for the device and its interfaces.

The following Configuration views are available for this device:

- Device Configuration View
- Port Configuration - CSIIIfPort View

See Chapter 1, *Introduction*, for information on *Accessing SPECTRUM Views* (page [1-2](#)).

Device Configuration View

This view provides device-specific configuration information as well as access to other views that allow you to configure device components.

Device Configuration Information

This section of the Configuration view displays the following device-specific information.

Contact Status

Indicates whether a connection with the device has been established.

This view also provides the following SPMA view buttons that allow you to configure this device. Refer to the ***SPECTRUM Portable Management Application Tools Guide*** for details on the views accessible from these buttons.

Component Table

Opens the Community Name window, which provides information on the Fast Ethernet SmartSwitch Module components.

Download Application

Opens the TFTP Download View, which enables you to upgrade the firmware for a Fast Ethernet SmartSwitch Module from a TFTP Boot or Bootp Server.

Trap Table

Opens the Trap Table, which allows you to set up your workstation to be notified of traps received and sent by the Fast Ethernet SmartSwitch Module.

Interface Configuration Table Information

This table within the Device Configuration view provides the following configuration information about the device's interfaces or ports.

Number of Interfaces

Displays the number of interfaces or ports available for this device.

Index

Displays the interface or port number.

Type

Displays the type of hardware interface or port. [Table 3-1](#) lists the possible interface types.

Table 3-1. Interface Types

Type	Description
Other	None of the following
Reg1822	Regular 1822
HDH1822	HDLC Distant Host protocol
DDNX25	Defense Data Network X.25
rfc877X25	RFC877 X.25
Ethernet	Ethernet CSMA/CD
iso88023	ISO CSMA/CD
iso88024	ISO token bus
iso88025	ISO token ring
iso88026	ISO man
starLan	StarLAN IEEE 802.3
Prot10MB	ProNET 10 Mbps
Prot80MB	ProNET 80 Mbps
HyChan	Hyperchannel
FDDI	Fiber Distributed Data Interface
LAPB	X.25 Line Access Procedure, Balanced
SDLC	IBM Synchronous Data Link Control protocol
T1	T1 link (USA and Japan)
CEPT	T1 link (Europe)
BasicISDN	Basic Integrated Services Digital Network
PrimISDN	Proprietary Integrated Services Digital Network
PPSerial	Proprietary Point to Point Serial

Table 3-1. Interface Types (Continued)

Type	Description
PPP	Point to Point Protocol
SFTWARLPBK	Software Loopback
CLNPoverIP	Connectionless Network Protocol over IP
Enet3MB	Ethernet 3 Mbps
XNSoverIP	Xerox Network Service Protocol over IP
SLIP	Generic Serial Line IP
ULTRA	ULTRA Technologies
T-3	T3 link
SMDS	Switched Multimegabit Data Service
FrameRelay	T1 Frame relay

Phy Address

Displays the physical (MAC) address of the interface or port.

Max Frame Size

Displays the maximum frame size for the interface or port.

Oper Status

Displays the current operational state of this interface or port (Up, Down, or Testing).

Port Configuration-CSIIfPort View

This view provides information on the configuration and operating status of the device's interfaces or ports. You can access this view from the Interface Device view in two ways:

- Double-click the administrative status label.
- Highlight the Interface icon and from the Icon Subviews menu, select **Configuration**.

Interface Index

Displays the numerical value identifying the interface or port.

Interface Type

Displays the type of interfaces.

Operation Status

Displays the current operating status of the port (On, Off, or Test).

Admin Status

Provides a button that allows you to enable or disable this port. Possible selections are On (enable), Off (disable), and Test.

If Description

Displays a description of the interface or port.

Operational Config

Sets the operational configuration to either half or full duplex.

Fast Ethernet Config

Sets the desired operational mode and sets advertised abilities.

Event and Alarm Messages

What Is in This Chapter

This chapter lists the types of events and alarms generated by the SMARTMIM-216 Module and provides any probable cause messages corresponding to these alarms.

Device Events and Alarms

[Table 4-1](#) lists the SPECTRUM database directory paths (in bold) and the messages displayed for the Event Log and Alarm Manager when applicable.

Table 4-1. SMARTMIM-216 Module Events and Alarms

Message in the Event Log	Alarm Manager Probable Cause Message
CsEvFormat/Event00010306 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has been cold started. (event [{e}])	No probable cause message
CsEvFormat/Event00010307 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m} has been warm started, (event [{e}])	No probable cause message

Table 4-1. SMARTMIM-216 Module Events and Alarms (Continued)

Message in the Event Log	Alarm Manager Probable Cause Message
CsEvFormat/Event00010308 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected a communication Link Down. (event [{e}])	CsPCause/Prob00010308 Communication link is down.
CsEvFormat/Event00010309 {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected a communication Link Up. (event [{e}])	No probable cause message
CsEvFormat/Event0001030a {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected an Authentication Failure. (event [{e}])	CsPCause/Prob0001030a Authorization failure. Other user is trying to connect to device with an invalid community string.
CsEvFormat/Event0001030b {d "%w- %d %m-, %Y - %T"} - A(n) {t} device, named {m}, has detected an EGP Neighbor Loss. EGP Neighbor IP address is {0 1}. (event [{e}])	CsPCause/Prob0001030b Lost contact with EGP neighbor.
CsEvFormat/Event00010401 {d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} is created with an IP address already used by another model. (event [{e}])	CsPCause/Prob00010401 DUPLICATE IP ADDRESS The model has the same IP address as that of some other model.
CsEvFormat/Event00010402 {d "%w- %d %m-, %Y - %T"} - Device {m} of type {t} is created with a physical (MAC) address already used by another model. (event [{e}])	CsPCause/Prob00010402 DUPLICATE PHYSICAL ADDRESS The model has the same Physical address (MAC address) as that of some other model.



Chapter 5

Application Views

What Is in This Chapter

This chapter describes the device-specific applications listed below for the SMARTMIM-216. The corresponding application model type is shown in parentheses.

- Fast Ethernet (FastEnetApp)
- DownloadApp (CtDownloadApp)

Common Applications

This device supports the following common applications described in the ***Application View Reference***:

- Bridging(CSIBridge)
 - Spanning Tree(Ct_Stp_App)
 - Static (Static_App)
 - Transparent (CT_Tp_Appl)
- MIB-II(SNMP2_Agent)
 -)ICMP (ICMP_App)
 - IP (IP2_App)
 - System(System2_App)
 - UDP (UDP2_App)
- RS-232 App (RFC1317App)

This device also supports the following service which is described in its management module guide.

- Standard RMON (RMON App)

- Ethernet Probe 1(RMONEthProbe) through Ethernet Probe 16 (RMONEthProbe)

Application View

The Application view displays information on any application supported by the device. Each application appears as an icon in the Application view. Access application-specific Model Information Views, Performance Views, and Detail Views from these icons. Depending on the specific application, various additional views are also available and discussed in this section.

Device Application View

This view shows the common and device-specific applications supported by this device and provides access to application-specific information.

See Chapter 1, [Introduction](#), for information on *Accessing SPECTRUM Views*.

[Figure 5-1](#) shows an example of an Application view in the Icon mode.

[Figure 5-2](#) shows an example of an Application view in the List mode.

To change the display mode, select **View -> Mode -> List** or **Icon**.

Figure 5-1. Device Application View (Icon Mode)

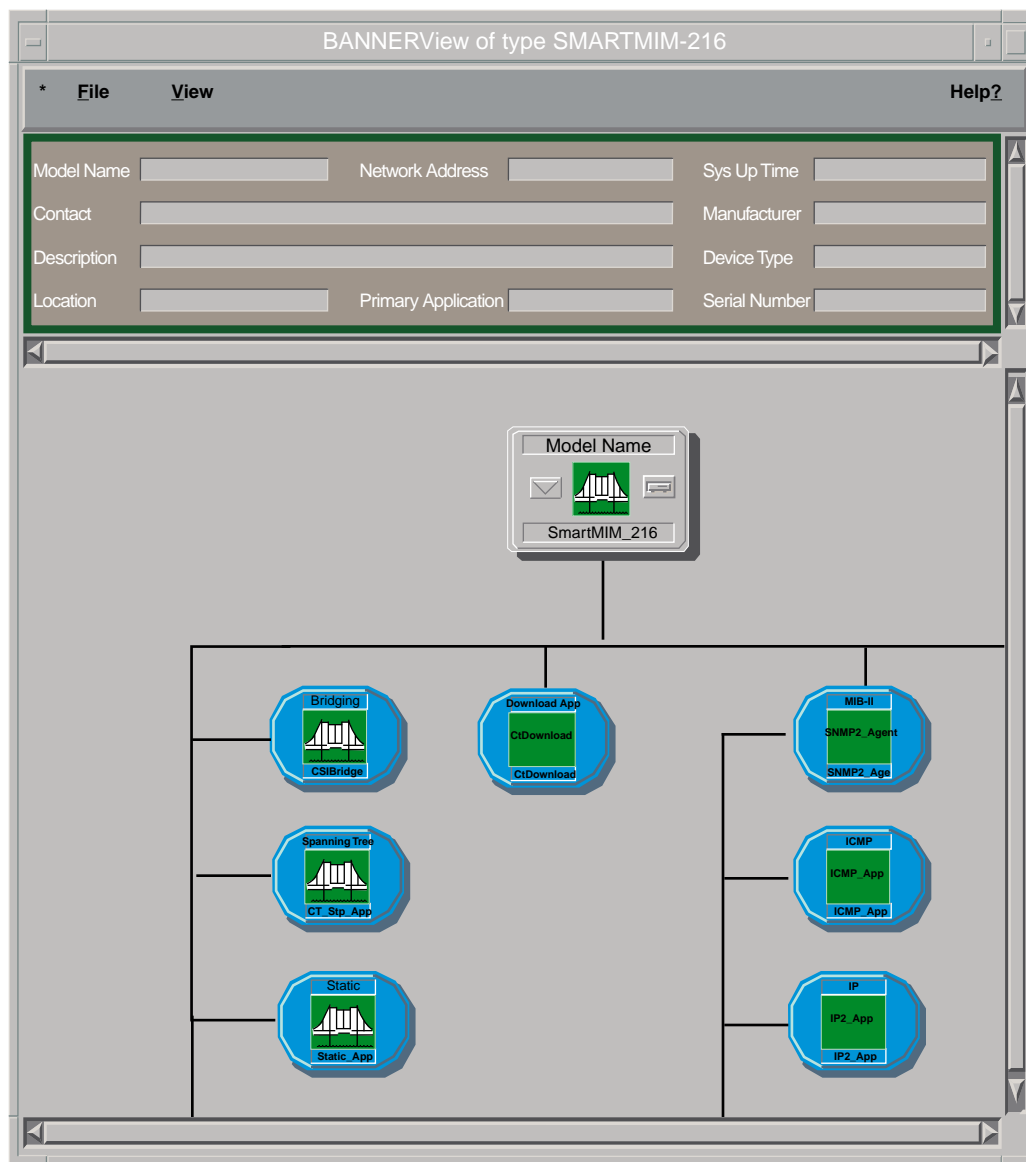
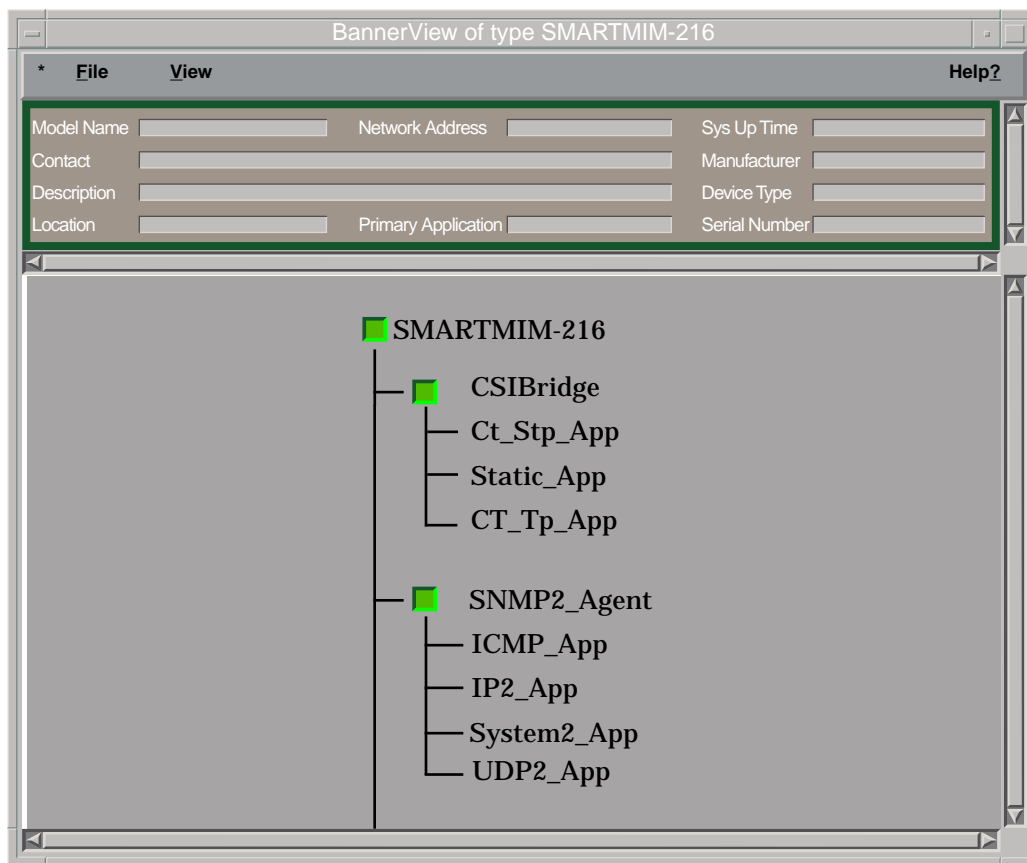


Figure 5-2. Device Application View (List Mode)



Fast Ethernet Application View

This section describes the Fast Ethernet Application view supported by the SMARTMIM-216. The Fast Ethernet uses FastEnetApp as the corresponding model type name. The application provides the Fast Ethernet Port Table and the Fast Ethernet Configuration view, which allows you to configure ports for Ethernet or Fast Ethernet transmissions or use auto-negotiation to determine transmission mode.

Fast Ethernet Port Table

To access this table:

1. Highlight the FastEnetApp icon (Icon Mode) or text label (List Mode).
2. From the Icon Subviews menu select **Control Table**.

The Fast Ethernet Port Table provides the following information:

Interface

Displays the interface number for which this Fast Ethernet information pertains.

Port Group

Displays the port group number for which this Fast Ethernet information pertains.

Port

Displays the physical port number for which this Fast Ethernet information pertains.

Operational Mode

Displays the current operational mode of this port.

Fast Ethernet Configuration View

The Fast Ethernet Configuration view allows you to configure ports for Ethernet or Fast Ethernet transmission or to use Auto-Negotiation in determining transmission mode. To access this view, double-click any entry in the Fast Ethernet Port Table. The Fast Ethernet Configuration view carries the Interface, Port Group, and Port information over from the Control Table (see Figure 5-3).

Figure 5-3. Fast Ethernet Configuration View

132.127.118.24 of type SMARTMIM-216

* File View Help?

Model Name Net Addr Sys Up Time
 Contact Manufacturer
 Description Device Type
 Location Primary Application

Interface Port Group Port

Operational Mode		
<input type="checkbox"/> Auto-Negotiation	<input type="checkbox"/> 100BaseTX	<input type="checkbox"/> 100BaseFX
<input type="checkbox"/> 10BaseT	<input type="checkbox"/> 100BaseTXFD	<input type="checkbox"/> 100BaseFXFD
<input type="checkbox"/> 10BaseTFD	<input type="checkbox"/> 100BaseT4	

Advertised Ability		
<input type="checkbox"/> 10BaseT	<input type="checkbox"/> 100BaseTXFD	<input type="checkbox"/> 100BaseFXFD
<input type="checkbox"/> 10BaseTFD	<input type="checkbox"/> 100BaseT4	
<input type="checkbox"/> 100BaseTX	<input type="checkbox"/> 100BaseFX	

Received Technology			
<input type="checkbox"/> Undefined	<input type="checkbox"/> 10BaseT	<input type="checkbox"/> 100BaseTXFD	<input type="checkbox"/> 100BaseFXFD
<input type="checkbox"/> Auto-Negotiation	<input type="checkbox"/> 10BaseTFD	<input type="checkbox"/> 100BaseT4	
<input type="checkbox"/> Not-Detected	<input type="checkbox"/> 100BaseTX	<input type="checkbox"/> 100BaseFX	

Operational Mode

This field indicates the current operational mode of this port. If you select auto-negotiation, you can select as many modes as needed from the Advertised Ability selections. You can only select one Operational Mode; either auto-negotiation or one of the specific modes. [Table 5-1](#) shows the current operational modes, their values, and descriptions.

Table 5-1. Current Operational Mode Values and Descriptions

Operational Mode	Value	Description
Auto-Negotiation	2	Auto-Negotiation/Parallel Detection
10Base-T	8	10Base-T
10Base-TFD	16	Full duplex 10Base-T
100Base-TX	32	100Base-TX
100Base-TXFD	64	Full duplex 100Base-TX
100Base-T4	128	100Base-T4
100Base-FX	256	100Base-FX
100Base-FXFD	512	Full Duplex 100Base-FX

Advertised Ability

This field indicates the advertised ability of the local hardware for ports that have auto-negotiation enabled. Auto-Negotiation allows the FE-100TX RJ45 port to self-configure to 10 or 100 Mbps depending on the speed of the attached device; the interfaces can also dynamically configure themselves for Full Duplex or Half Duplex (standard mode) operation when both ends of the link support auto-negotiation. When only one link partner supports auto-negotiation, the mode defaults to Half Duplex.

Both local and remote management for the SMARTMIM-216 provide the ability to disable auto-negotiation if desired. A port that does not support auto-negotiation will be read as “other (1)”.

Table 5-2 shows the Advertised Ability modes, their values, and descriptions.

Table 5-2. Advertised Ability Mode Values and Descriptions

Advertised Ability	Value	Description
10Base-T	8	10Base-T
10Base-TFD	16	Full Duplex 10Base-T
100Base-TX	32	100Base-TX
100Base-TXFD	64	Full Duplex 100Base-TX
100Base-T4	128	100Base-T4
100Base-FX	256	100Base-FX
100Base-FXFD	512	Full Duplex 100Base-FX

Received Technology

This field indicates the advertised ability of the remote hardware, or link partner. These modes are read-only. [Table 5-3](#) shows the Received Technology Ability modes, their values, and descriptions.

Table 5-3. Received Technology Ability Values and Descriptions

Received Technology	Value	Description
Undefined	1	Undefined
Auto-Negotiation	2	Auto-Negotiation/Parallel Detection
Not-Detected	4	Link Partner does not support Auto-Negotiation
10Base-T	8	10Base-T
10Base-TFD	16	Full duplex 10Base-T
100Base-TX	32	100Base-TX
100Base-TXFD	64	Full duplex 100Base-TX
100Base-T4	128	100Base-T4
100Base-FX	256	100Base-FX
100Base-FXFD	512	Full duplex 100Base-FX

Download Application

This application provides download functionality for this device. The model type for this application is CtDownloadApp. Access the Download Application view as follows:

1. Within the Application view, highlight the CtDownloadApp icon (icon mode) or model type name (list mode).
2. From the Icon Subviews menu, select **Download Application**.

The Download Application view is an SPMA view and is described in the ***SPECTRUM Portable Management Application Tools Guide***.



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